

**Carayol, Henri****Sur la mauvaise réduction des courbes de Shimura. (Bad reduction of Shimura curves).**(French) [Zbl 0599.14019](#)

C. R. Acad. Sci., Paris, Sér. I 296, 557-560 (1983).

Let  $B/F$  be a quaternion algebra over a totally real number field which splits at exactly one infinite prime. Let  $K \subset B^\times(\mathbb{A}_f)$  be an open and compact subgroup. Denote by  $M_K$  the Shimura variety associated with  $B$  and  $K$ . Fix a prime  $\mathfrak{p}$  of  $F$  where  $B$  splits. The reduction of  $M_K$  at  $\mathfrak{p}$  has been studied by several authors if  $K$  is maximal compact at  $\mathfrak{p}$ . In the contrary case nothing was known except for  $B = M_2(\mathbb{Q})$ , because the usual interpretation of  $M_K$  as a moduli scheme fails in characteristic  $p$ . Following an idea of Drinfel'd the author gives a suitable interpretation as a moduli scheme and obtains a description of the reduction.

**MSC:**

- [14G25](#) Global ground fields in algebraic geometry
- [14K15](#) Arithmetic ground fields for abelian varieties
- [14K10](#) Algebraic moduli of abelian varieties, classification
- [14H45](#) Special algebraic curves and curves of low genus

Cited in **3** Documents**Keywords:**bad reduction of Shimura curves; Shimura variety; characteristic  $p$